

## ABSTRACT OF THE DISCLOSURE

It is an object of this invention to efficiently correct, with a small calculation amount, the unbalance caused between the first and second image signals when  
5 limitation is imposed by vignetting in a photographing optical system. In order to achieve this object, there is provided a focus detection device comprising a solid-state image sensing device including a first photoelectric conversion element array which  
10 photoelectrically converts a first light beam passing through a first area of an exit pupil of a photographing optical system, and a second photoelectric conversion element array which photoelectrically converts a second light beam passing  
15 through a second area of the exit pupil which is different from the first area, and a computing unit for detecting a focus state of the photographing optical system by computing a correlation between a first image signal which is an image signal from the first  
20 photoelectric conversion element array and a second image signal which is an image signal from the second photoelectric conversion element array in accordance with the position of a focus detection area in an image sensing frame on the basis of the ratio between a shift  
25 amount  $t$  of a focus detection opening pupil, formed when limitation is imposed by an exit window of the photographing optical system, with respect to an

optical axis, and a width  $T$  of the focus detection opening pupil.